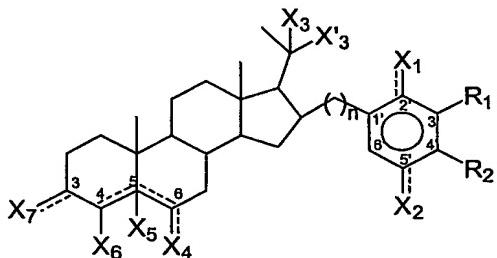


## CLAIMS

1. A compound having the structural formula I, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof,



5

formula I

wherein  $X_1$ ,  $X_2$ ,  $R_1$  and  $R_2$  are independently selected from the group comprising oxo, hydrogen, hydroxyl, oxyalkyl, alkyl, alkenyl, alkynyl, alkyloxy, alkyloxyalkyl, alkylthioalkyl, alkoxy carbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl, 10 cycloalkylalkanoyl, cycloalkylthiocarbonyl, cycloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, arylthiocarbonyl, aralkoxycarbonyl, arylalkylthiocarbonyl, aryloxyalkyl, arylthioalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aroyl, aryloxycarbonylalkyl, aryloxyalkanoyl, carboxyl, 15 alkenylcarbonyl, alkynylcarbonyl,  $Het^1$ ,  $Het^1$ alkyl,  $Het^1$ oxyalkyl,  $Het^1$ aryl,  $Het^1$ aralkyl,  $Het^1$ cycloalkyl,  $Het^1$ alkoxycarbonyl,  $Het^1$ alkylthiocarbonyl,  $Het^1$ oxycarbonyl,  $Het^1$ thiocarbonyl,  $Het^1$ alkanoyl,  $Het^1$ aralkanoyl,  $Het^1$ aryloxyalkyl,  $Het^1$ alkyloxyalkyl,  $Het^1$ arylthioalkyl,  $Het^1$ aryloxy carbonyl,  $Het^1$ aralkoxycarbonyl,  $Het^1$ aroyl,  $Het^1$ oxyalkylcarbonyl,  $Het^1$ alkyloxyalkylcarbonyl, 20  $Het^1$ carbonyloxyalkyl,  $Het^1$ alkylcarbonyloxyalkyl,  $Het^1$ aralkylcarbonyloxyalkyl,  $Het^2$ alkyl,  $Het^2$ oxyalkyl,  $Het^2$ alkyloxyalkyl,  $Het^2$ aralkyl,  $Het^2$ carbonyl,  $Het^2$ oxycarbonyl,  $Het^2$ thiocarbonyl,  $Het^2$ alkanoyl,  $Het^2$ alkylthiocarbonyl,  $Het^2$ alkoxycarbonyl,  $Het^2$ aralkanoyl,  $Het^2$ aralkoxycarbonyl,  $Het^2$ aryloxy carbonyl,  $Het^2$ aroyl,  $Het^2$ aryloxyalkyl,  $Het^2$ arylthioalkyl,  $Het^2$ oxyalkylcarbonyl,  $Het^2$ alkyloxyalkylcarbonyl, 25  $Het^2$ carbonyloxyalkyl,  $Het^2$ alkylcarbonyloxyalkyl,  $Het^2$ aralkylcarbonyloxyalkyl, cyano,  $CR^3=NR^4$ ,  $CR^3=N(OR^4)$ , aminocarbonyl, aminoalkanoyl, aminoalkyl, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl,  $Het^1$ ,  $Het^2$ , cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>2</sub>, hydroxy, cyano, halogen or 30 amino optionally mono- or disubstituted wherein the substituents are independently

selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, 5 cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino, Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>3</sup>, SR<sup>3</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>4</sup>, SO<sub>2</sub>N(OH)R<sup>3</sup>, CN, CR<sup>3</sup>=NR<sup>4</sup>, S(O)R<sup>3</sup>, SO<sub>2</sub>R<sup>3</sup>, CR<sup>3</sup>=N(OR<sup>4</sup>), N<sub>3</sub>, NO<sub>2</sub>, NR<sup>3</sup>R<sup>4</sup>, N(OH)R<sup>3</sup>, C(O)R<sup>3</sup>, C(S)R<sup>3</sup>, CO<sub>2</sub>R<sup>3</sup>, C(O)SR<sup>3</sup>, C(O)NR<sup>3</sup>R<sup>4</sup>, C(S)NR<sup>3</sup>R<sup>4</sup>, C(O)N(OH)R<sup>4</sup>, C(S)N(OH)R<sup>3</sup>, NR<sup>3</sup>C(O)R<sup>4</sup>, NR<sup>3</sup>C(S)R<sup>4</sup>, N(OH)C(O)R<sup>4</sup>, N(OH)C(S)R<sup>3</sup>, 10 NR<sup>3</sup>CO<sub>2</sub>R<sup>4</sup>, NR<sup>3</sup>C(O)NR<sup>4</sup>R<sup>5</sup>, and NR<sup>3</sup>C(S)NR<sup>4</sup>R<sup>5</sup>, N(OH)CO<sub>2</sub>R<sup>3</sup>, NR<sup>3</sup>C(O)SR<sup>4</sup>, N(OH)C(O)NR<sup>3</sup>R<sup>4</sup>, N(OH)C(S)NR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>C(O)N(OH)R<sup>4</sup>, NR<sup>3</sup>C(S)N(OH)R<sup>4</sup>, NR<sup>3</sup>SO<sub>2</sub>R<sup>4</sup>, NHSO<sub>2</sub>NR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>SO<sub>2</sub>NHR<sup>4</sup>, P(O)(OR<sup>3</sup>)(OR<sup>4</sup>), wherein t is an integer between 1 and 2 and R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are each independently selected from the group comprising hydrogen, hydroxyl, alkyl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, 15 arylcarbonylamino alkylthiocarbonylamino and arylthiocarbonylamino;

wherein X<sub>3</sub> participates together with X<sub>3'</sub> to an oxo functional group, or wherein X<sub>3</sub> and X<sub>3'</sub> are independently selected from the group comprising hydrogen, hydroxyl, sulfur, oxyalkyl, oxycarbonyl, alkyl, Het<sup>1</sup>alkyl, alkyloxycarbonyl, alkenyl, alkynyl, aminoalkyl, aminoacyl, alkylcarbonylamino, alkylthiocarbonylamino, Het<sup>1</sup>, glycosyl, thio derivatives 20 thereof, carboxy derivatives thereof, amino derivatives thereof, amido derivatives thereof, hydroxyl-protected derivatives thereof, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl; mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen or amino 25 optionally mono- or disubstituted wherein the substituents are independently selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and 30 cycloalkylalkyl;

wherein X<sub>4</sub> and X<sub>7</sub> are independently selected from the group comprising hydrogen, oxygen, halogen, oxo, carbonyl, thiocarbonyl, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, hydroxyalkyl, hydroxycarbonyl, hydroxycarbonylalkyl, hydroxycarbonylaryl, hydroxycarbonyloxyalkyl, glycosyl, thio derivatives thereof, amino 35 derivatives thereof, carboxy derivatives thereof, amido derivatives thereof, hydroxyl-

protected derivatives thereof, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen or amino 5 optionally mono- or disubstituted wherein the substituents are independently selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and 10 cycloalkylalkyl;

wherein at least one of X<sub>3</sub>, X'<sub>3</sub>, X<sub>4</sub> and X<sub>7</sub> is a glycosyl moiety; or a deoxy derivative thereof, a carboxy derivative thereof, a hydroxy protected derivative thereof, an amino derivative thereof, an amido derivatives thereof, a thio derivative thereof, optionally substituted by one or more substituents,

15 wherein X<sub>5</sub> participates to a double bond between the carbon atoms in position 4 and 5 or between carbon atoms in position 5 and 6, and X<sub>6</sub> is selected from the group comprising hydrogen, hydroxyl and hydroxyalkyl, or

20 wherein X<sub>5</sub> and X<sub>6</sub> are independently selected from the group comprising halogen, hydrogen, hydroxyl, hydroxyalkyl, aminoalkyl, aminoaryl, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, and

wherein n is an integer between 0 and 10.

2. A compound according to claim 1, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof,

25 wherein X<sub>1</sub>, X<sub>2</sub>, R<sub>1</sub> and R<sub>2</sub> are independently selected from the group comprising oxo, hydrogen, hydroxyl, oxyalkyl, alkyl, alkenyl, alkynyl, alkyloxy, alkyloxycarbonyl, alkylthioalkyl, alkoxycarbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl, cycloalkylalkanoyl, cycloalkylthiocarbonyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, 30 cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, arylthiocarbonyl, aralkoxycarbonyl, arylalkylthiocarbonyl, aryloxyalkyl, arylthioalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aroyl, aryloxycarbonylalkyl, aryloxyalkanoyl, carboxyl, alkenylcarbonyl, alkynylcarbonyl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>oxyalkyl, Het<sup>1</sup>aryl, Het<sup>1</sup>aralkyl, Het<sup>1</sup>cycloalkyl, Het<sup>1</sup>alkoxycarbonyl, Het<sup>1</sup>alkylthiocarbonyl, Het<sup>1</sup>oxycarbonyl,

Het<sup>1</sup>thiocarbonyl, Het<sup>1</sup>alkanoyl, Het<sup>1</sup>aralkanoyl, Het<sup>1</sup>aryloxyalkyl, Het<sup>1</sup>alkyloxyalkyl,  
 Het<sup>1</sup>arylthioalkyl, Het<sup>1</sup>aryloxycarbonyl, Het<sup>1</sup>aralkoxycarbonyl, Het<sup>1</sup>aroyl,  
 Het<sup>1</sup>oxyalkylcarbonyl, Het<sup>1</sup>alkyloxyalkylcarbonyl, Het<sup>1</sup>aryloxyalkylcarbonyl,  
 Het<sup>1</sup>carbonyloxyalkyl, Het<sup>1</sup>alkylcarbonyloxyalkyl, Het<sup>1</sup>aralkylcarbonyloxyalkyl, Het<sup>2</sup>alkyl,  
 5 Het<sup>2</sup>oxyalkyl, Het<sup>2</sup>alkyloxyalkyl, Het<sup>2</sup>aralkyl, Het<sup>2</sup>carbonyl, Het<sup>2</sup>oxycarbonyl,  
 Het<sup>2</sup>thiocarbonyl, Het<sup>2</sup>alkanoyl, Het<sup>2</sup>alkylthiocarbonyl, Het<sup>2</sup>alkoxycarbonyl, Het<sup>2</sup>aralkanoyl,  
 Het<sup>2</sup>aralkoxycarbonyl, Het<sup>2</sup>aryloxycarbonyl, Het<sup>2</sup>aroyl, Het<sup>2</sup>aryloxyalkyl, Het<sup>2</sup>arylthioalkyl,  
 Het<sup>2</sup>oxyalkylcarbonyl, Het<sup>2</sup>alkyloxyalkylcarbonyl, Het<sup>2</sup>aryloxyalkylcarbonyl,  
 Het<sup>2</sup>carbonyloxyalkyl, Het<sup>2</sup>alkylcarbonyloxyalkyl, Het<sup>2</sup>aralkylcarbonyloxyalkyl, cyano,  
 10 CR<sup>3</sup>=NR<sup>4</sup>, CR<sup>3</sup>=N(OR<sup>4</sup>), aminocarbonyl, aminoalkanoyl, aminoalkyl, optionally substituted  
 by one or more substituents independently selected from the group comprising alkyl,  
 aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl,  
 mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)<sub>t</sub>, hydroxy, cyano, halogen or  
 amino optionally mono- or disubstituted wherein the substituents are independently  
 15 selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio,  
 aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy,  
 aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino,  
 aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl,  
 cycloalkylalkyl, Het<sup>1</sup>, Het<sup>2</sup>, Het<sup>1</sup>alkyl, Het<sup>2</sup>alkyl, Het<sup>1</sup>amino, Het<sup>2</sup>amino, Het<sup>1</sup>alkylamino,  
 20 Het<sup>2</sup>alkylamino, Het<sup>1</sup>thio, Het<sup>2</sup>thio, Het<sup>1</sup>alkylthio, Het<sup>2</sup>alkylthio, Het<sup>1</sup>oxy and Het<sup>2</sup>oxy, OR<sup>3</sup>,  
 SR<sup>3</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>4</sup>, SO<sub>2</sub>N(OH)R<sup>3</sup>, CN, CR<sup>3</sup>=NR<sup>4</sup>, S(O)R<sup>3</sup>, SO<sub>2</sub>R<sup>3</sup>, CR<sup>3</sup>=N(OR<sup>4</sup>), N<sub>3</sub>, NO<sub>2</sub>,  
 NR<sup>3</sup>R<sup>4</sup>, N(OH)R<sup>3</sup>, C(O)R<sup>3</sup>, C(S)R<sup>3</sup>, CO<sub>2</sub>R<sup>3</sup>, C(O)SR<sup>3</sup>, C(O)NR<sup>3</sup>R<sup>4</sup>, C(S)NR<sup>3</sup>R<sup>4</sup>,  
 C(O)N(OH)R<sup>4</sup>, C(S)N(OH)R<sup>3</sup>, NR<sup>3</sup>C(O)R<sup>4</sup>, NR<sup>3</sup>C(S)R<sup>4</sup>, N(OH)C(O)R<sup>4</sup>, N(OH)C(S)R<sup>3</sup>,  
 NR<sup>3</sup>CO<sub>2</sub>R<sup>4</sup>, NR<sup>3</sup>C(O)NR<sup>4</sup>R<sup>5</sup>, and NR<sup>3</sup>C(S)NR<sup>4</sup>R<sup>5</sup>, N(OH)CO<sub>2</sub>R<sup>3</sup>, NR<sup>3</sup>C(O)SR<sup>4</sup>,  
 25 N(OH)C(O)NR<sup>3</sup>R<sup>4</sup>, N(OH)C(S)NR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>C(O)N(OH)R<sup>4</sup>, NR<sup>3</sup>C(S)N(OH)R<sup>4</sup>, NR<sup>3</sup>SO<sub>2</sub>R<sup>4</sup>,  
 NHSO<sub>2</sub>NR<sup>3</sup>R<sup>4</sup>, NR<sup>3</sup>SO<sub>2</sub>NHR<sup>4</sup>, P(O)(OR<sup>3</sup>)(OR<sup>4</sup>), wherein t is an integer between 1 and 2  
 and R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are each independently selected from the group comprising hydrogen,  
 hydroxyl, alkyl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino,  
 arylcarbonylamino alkylthiocarbonylamino and arylthiocarbonylamino;  
 30 wherein X<sub>3</sub> participates together with X'<sub>3</sub> to an oxo functional group, or wherein X<sub>3</sub>  
 and X'<sub>3</sub> are independently selected from the group comprising hydrogen, hydroxyl, sulfur,  
 oxyalkyl, oxycarbonyl, alkyl, Het<sup>1</sup>alkyl, alkyloxycarbonyl, alkenyl, alkynyl, aminoalkyl,  
 aminoacyl, alkylcarbonylamino, alkylthiocarbonylamino, Het<sup>1</sup>, glucosyl, fructosyl,  
 galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl,  
 35 threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl,  
 psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl,

isomaltosyl, kojibiosyl, laminaribiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, palatinosyl, lactulosyl, gentianosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, isomaltotriosyl,  
5 maltopentaosyl, maltohexaosyl, maltoheptaosyl, sicosyl, panosyl, isopanosyl, inosyl, N-acetylgalactosaminyl, mannotriosyl, globotriosyl, erlosyl, neotrehalosyl, chitobiosyl, chitobiosemannosyl, glucosaminyl, N-acetyl-glucosaminyl, octylglucopyranosyl, octylirofuranosyl, cyclohexylglucopyranosyl, cyclohexylxylofuranosyl, benzylglucopyranosyl, benzylarabinofuranosyl, N-acetyl-lactosaminyl, acosaminyl,  
10 amicetosyl, amylosyl, apiosyl, arcanosyl, ascarylosyl, bacillosaminyl, boivinosyl, cellotriosyl, chacotriosyl, chalcosyl, cladinosyl, colitosyl, cymarosyl, daunosaminyl, desosaminyl, D-glycero-L-gulo-heptosyl, diginosyl, digitalosyl, digitoxosyl, evalosyl, evernitrosyl, forosaminyl, fucosaminyl, garosaminyl, hamamelosyl, isolevoglucosenonyl, kanosaminyl, kansosaminyl, lactosaminyl, lactosediaminyl, fucitolyl, maltulosyl,  
15 mannosaminyl, melezitosyl, mycaminosyl, mycarosyl, mycinosyl, mycosaminyl, noviosyl, oleandrosyl, paratosyl, perosaminyl, planteosyl, pneumosaminyl, pururosaminyl, quinovosaminyl, quinovosyl, rhamnitolyl, rhamnosaminyl, rhodinosyl, rhodosaminyl, sarmentosyl, solatriosyl, stachyosyl, streptosyl, umbelliferosyl, trehalosaminyl, 1,6-anhydro-D-glucopyranosyl, 1-hydroxy- $\alpha$ -D-allopyranosyl, 2,3:5,6-di-O-isopropylidene-D-  
20 mannofuranosyl, 2-amino-2-deoxy-D-galactitolyl, 2-deoxyribosyl, 2-deoxyglucosyl, 5-amino-5-deoxy-D-glucopyranosyl, 6-deoxy-D-galactitolyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-  
galactosyl, 2-amino-2-deoxy mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-  
deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-  
25 N-acetylglucosaminyl lactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-  
acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-  
D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-  
fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  
 $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form  
30 thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate or  
benzoyl derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio  
derivatives thereof, di-, tri-, oligo- and polysaccharide thereof optionally substituted by one  
or more substituents independently selected from the group comprising alkyl, aralkyl, aryl,  
Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or  
35 di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen or amino  
optionally mono- or disubstituted wherein the substituents are independently selected

from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and 5 cycloalkylalkyl;

wherein  $X_4$  and  $X_7$  are independently selected from the group comprising hydrogen, oxygen, halogen, oxo, carbonyl, thiocarbonyl, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, hydroxyalkyl, hydroxycarbonyl, hydroxycarbonylalkyl, hydroxycarbonylaryl, hydroxycarbonyloxyalkyl, glucosyl, fructosyl, galactosyl, mannosyl, 10 ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminaribiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, 15 raffinosyl, palatinosyl, lactulosyl, gentianosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, isomaltotriosyl, maltopentaosyl, maltohexaosyl, maltoheptaosyl, sicosyl, panosyl, isopanoseosyl, inosyl, N-acetylgalactosaminyl, mannotriosyl, globotriosyl, erlosyl, neotrehalosyl, chitobiosyl, chitobiosemannosyl, glucosaminyl, N-acetyl-glucosaminyl, octylglucopyranosyl, 20 octyribosyl, cyclohexylglucopyranosyl, cyclohexylxylofuranosyl, benzylglucopyranosyl, benzylarabinofuranosyl, N-acetyl-lactosaminyl, acosaminyl, amicetosyl, amylosyl, apiosyl, arcanosyl, ascarulosyl, bacillosaminyl, boivinosyl, cellotriosyl, chacotriosyl, chalcosyl, cladinosyl, colitosyl, cymarosyl, daunosaminyl, desosaminyl, D-glycero-L-gulo-heptosyl, diginosyl, digitalosyl, digitoxosyl, evalosyl, 25 evernitrosyl, forosaminyl, fucosaminyl, garosaminyl, hamamelosyl, isolevoglucosenonoyl, kanosaminyl, kansosaminyl, lactosaminyl, lactosediaminyl, fucitolyl, maltulosyl, mannosaminyl, melezitosyl, mycaminosyl, mycarosyl, mycinosyl, mycosaminyl, noviosyl, oleandrosyl, paratosyl, perosaminyl, planteosyl, pneumosaminyl, pururosaminyl, quinovosaminyl, quinovosyl, rhamnitolyl, rhamnosaminyl, rhodinosyl, rhodosaminyl, 30 sarmentosyl, solatriosyl, stachyosyl, streptosyl, umbelliferosyl, trehalosaminyl, 1,6-anhydro-D-glucopyranosyl, 1-hydroxy- $\alpha$ -D-allopyranosyl, 2,3:5,6-di-O-isopropylidene-D-mannofuranosyl, 2-amino-2-deoxy-D-galactitolyl, 2-deoxyribosyl, 2-deoxyglucosyl, 5-amino-5-deoxy-D-glucopyranosyl, 6-deoxy-D-galactitolyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy- 35 galactosyl, 2-amino-2-deoxy-mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-

N-acetylglucosaminyl lactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate or benzoyl derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio derivatives thereof, di-, tri-, oligo- and polysaccharide thereof optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen or amino optionally mono- or disubstituted wherein the substituents are independently selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and cycloalkylalkyl;

wherein at least one of X<sub>3</sub>, X'<sub>3</sub>, X<sub>4</sub> and X<sub>7</sub> is a glycosyl moiety selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminaribiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, palatinosyl, lactulosyl, gentianosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, isomaltotriosyl, maltopentaosyl, maltohexaosyl, maltoheptaosyl, sicosyl, panosyl, isopanosyl, inosyl, N-acetylgalactosaminyl, mannotriosyl, globotriosyl, erlosyl, neotrehalosyl, chitobiosyl, chitobiosemannosyl, glucosaminyl, N-acetyl-glucosaminyl, octylglucopyranosyl, octylibofuranosyl, cyclohexylglucopyranosyl, cyclohexylxylofuranosyl, benzylglucopyranosyl, benzylarabinofuranosyl, N-acetyl-lactosaminyl, acosaminyl, amicetosyl, amylosyl, apiosyl, arcanosyl, ascaryllosyl, bacillosaminyl, boivinosyl, cellotriosyl, chacotriosyl, chalcosyl, cladinosyl, colitosyl, cymarosyl, daunosaminyl, desosaminyl, D-glycero-L-gulo-heptosyl, diginosyl, digitalosyl, digitoxosyl, evalosyl, evernitrosyl, forosaminyl, fucosaminyl, garosaminyl, hamamelosyl, isolevoglucosenonyl, kanosaminyl, kansosaminyl,

lactosaminyl, lactosediaminyl, fucitolyl, maltulosyl, mannosaminyl, melezitosyl, mycaminosyl, mycarosyl, mycinosyl, mycosaminyl, noviosyl, oleandrosyl, paratosyl, perosaminyl, planteosyl, pneumosaminyl, purpurosaminyl, quinovosaminyl, quinovosyl, rhamnitoly, rhamnosaminyl, rhodinosyl, rhodosaminyl, sarmenosyl, solatriosyl,  
 5 stachyosyl, stretosyl, umbelliferosyl, trehalosaminyl, 1,6-anhydro-D-glucopyranosyl, 1-hydroxy- $\alpha$ -D-allopyranosyl, 2,3:5,6-di-O-isopropylidene-D-mannofuranosyl, 2-amino-2-deoxy-D-galactitoly, 2-deoxyribosyl, 2-deoxyglucosyl, 5-amino-5-deoxy-D-glucopyranosyl, 6-deoxy-D-galactitoly, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-amino-2-deoxy mannosyl,  
 10 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyl lactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O-  
 15  $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate or benzoyl derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio derivatives thereof, di-, tri-, oligo- and polysaccharide thereof optionally substituted as indicated above ;

20 wherein  $X_5$  participates to a double bond between the carbon atoms in position 4 and 5 or between carbon atoms in positions 5 and 6, and  $X_6$  is selected from the group comprising hydrogen, hydroxyl and hydroxyalkyl, or

wherein  $X_5$  and  $X_6$  are independently selected from the group comprising halogen hydrogen, hydroxyl, hydroxyalkyl, aminoalkyl, aminoaryl, optionally substituted by one or  
 25 more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, and

wherein n is an integer between 0 and 10.

3. A compound according to claim 1 or 2, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof,

30 wherein  $X_1$ ,  $X_2$ ,  $R_1$  and  $R_2$  are independently selected from the group comprising hydrogen, hydroxyl, oxyalkyl, oxo, alkyl, alkenyl, alkynyl, alkyloxy, alkyloxylalkyl, alkylthioalkyl, alkoxy carbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl, cycloalkylalkanoyl, cycloalkylthiocarbonyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl,

cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, arylthiocarbonyl, aralkoxycarbonyl, arylalkylthiocarbonyl, aryloxyalky, arylthioalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aroyl, aryloxycarbonylalkyl, aryloxyalkanoyl, carboxyl, alkenylcarbonyl and alkynylcarbonyl;

- 5 wherein  $X_3$  participates together with  $X'_3$  to an oxo functional group, or wherein  $X_3$  and  $X'_3$  are independently selected from the group comprising hydrogen, hydroxyl, sulfur, oxyalkyl, oxycarbonyl, alkyl,  $\text{Het}^1$ alkyl, alkyloxycarbonyl, alkenyl, alkynyl, aminoalkyl, aminoacyl, alkylcarbonylamino, alkylthiocarbonylamino,  $\text{Het}^1$ , glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminaribiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, palatinosyl, lactulosyl, gentianosyl, 3-mannobiosyl, 6-15 mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriose, maltotetraose, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-amino-2-deoxy-mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-20 glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected 25 acetate or benzoyl derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl,  $\text{Het}^1$ ,  $\text{Het}^2$ , cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl and aminocarbonyl;
- 30 wherein  $X_4$  and  $X_7$  are independently selected from the group comprising hydrogen, oxygen, halogen, oxo, carbonyl, thiocabonyl, hydroxyl, alkyl, aryl,  $\text{Het}^1$ ,  $\text{Het}^1$ alkyl,  $\text{Het}^1$ aryl, alkenyl, alkynyl, hydroxyalkyl, hydroxycarbonyl, hydroxycarbonylalkyl, hydroxycarbonylaryl, hydroxycarbonyloxyalkyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl,
- 35

laminaribiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, palatinosyl, lactulosyl, gentianosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-

5 acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxygalactosyl, 2-amino-2-deoxy-mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminylgalactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-10 D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate or benzoyl derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl and aminocarbonyl;

20 wherein at least one of X<sub>3</sub>, X'<sub>3</sub>, X<sub>4</sub> and X<sub>7</sub> is a glycosyl moiety selected from the group as indicated above;

wherein X<sub>5</sub> participates to a double bond between the carbon atoms in position 4 and 5 or between carbon atoms in position 5 and 6, and X<sub>6</sub> is selected from the group comprising hydrogen, hydroxyl, and hydroxyalkyl, or wherein X<sub>5</sub> and X<sub>6</sub> are independently selected from the group comprising hydrogen, hydroxyl, hydroxyalkyl, aminoalkyl, 25 aminoaryl, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, and

wherein n is an integer between 0 and 5.

4. A compound according to any of claims 1 to 3, stereoisomers, tautomers, racemics, 30 prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof,

wherein X<sub>1</sub>, X<sub>2</sub>, R<sub>1</sub> and R<sub>2</sub> are independently selected from the group comprising hydrogen, hydroxyl, alkyloxy, oxo and oxyalkyl,

wherein X<sub>3</sub> participates together with X'<sub>3</sub> to an oxo functional group, or wherein X<sub>3</sub> 35 and X'<sub>3</sub> are independently selected from the group comprising hydrogen, hydroxyl,

oxyalkyl, oxycarbonyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, altrosyl, laminaribiosyl, isomaltosyl, maltosyl, lactosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-5 galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-amino-2-deoxy-mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyl lactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-10 acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate 15 derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof;

wherein X<sub>4</sub> and X<sub>7</sub> are independently selected from the group comprising hydrogen, oxygen, oxo, hydroxyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, 20 ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, altrosyl, laminaribiosyl, isomaltosyl, maltosyl, lactosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-25 galactosyl, 2-amino-2-deoxy-mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyl lactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate or benzoyl derivatives thereof, amino derivatives thereof, amido derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and 30 polysaccharide thereof;

wherein at least one of  $X_3$ ,  $X'_3$ ,  $X_4$  and  $X_7$  is a glycosyl moiety selected from the group as indicated above;

wherein  $X_4$  or  $X_8$  are hydrogen and wherein  $X_5$  participates to a double bond between the carbon atoms in position 4 and 5 or in position 5 and 6, and

5 wherein n is an integer between 0 and 2.

5. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein  $X_1$  and  $X_2$  are  $-OMe$ , wherein  $R_1$  and  $R_2$  are  $-H$ , wherein  $X_3$  is selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl,  
10 maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl,  
15 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a  
20 trisaccharide thereof, wherein  $X'_3$  is selected from the group comprising hydrogen, alkyl or aralkyl, wherein  $X_4$  is hydrogen, wherein  $X_5$  participates to a double bond between the carbon atoms in position 5 and 6, wherein  $X_6$  is  $-H$ , wherein  $X_7$  is selected from the group comprising hydrogen, oxygen, hydroxyl or oxo, and wherein n is 0.

6. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein  $X_1$  and  $X_2$  are  $-OMe$ , wherein  $R_1$  and  $R_2$  are  $-H$ , wherein  $X_3$  is selected from the group comprising hydrogen, hydroxyl, oxyalkyl or oxycarbonyl, wherein  $X'_3$  is selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-Amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-

D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein X<sub>4</sub> is hydrogen, wherein X<sub>5</sub> participates to a double bond between the carbon atoms in position 5 and 6, wherein X<sub>6</sub> is -H, wherein X<sub>7</sub> is selected from the group comprising hydrogen, oxygen, hydroxyl or oxo, and wherein n is 0.

7. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein X<sub>1</sub> and X<sub>2</sub> are -OMe, wherein R<sub>1</sub> and R<sub>2</sub> are -H, wherein X<sub>3</sub> participates together with X'<sub>3</sub> to an oxo functional group, wherein X<sub>4</sub> is selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein X<sub>5</sub> participates to a double bond between the carbon atoms in position 4 and 5, wherein X<sub>6</sub> is -H, wherein X<sub>7</sub> is selected from the group comprising hydrogen, oxygen, hydroxyl, alkyloxy or oxo, and wherein n is 0.

8. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein X<sub>1</sub> and X<sub>2</sub> are -OMe, wherein R<sub>1</sub> and R<sub>2</sub> are -H, wherein X<sub>3</sub> participates together with X'<sub>3</sub> to an oxo functional group, wherein X<sub>4</sub> is hydrogen, wherein X<sub>5</sub> participates to a double bond between the carbon atoms in position 5 and 6, wherein X<sub>6</sub> is -H, wherein X<sub>7</sub> is selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-

- galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof; and wherein n is 0.
9. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein  $X_1$  and  $X_2$  are -OMe, wherein  $R_1$  and  $R_2$  are -H, wherein  $X_3$  or  $X'_3$  are independently selected from the group comprising hydrogen or glucosyl, fructosyl, galactosyl,mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-Amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3'-Fucosyl-D-Lactosyl, 3'-Fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein  $X_4$  is selected from the group comprising glucosyl, fructosyl, galactosyl,mannosyl, fucosyl, isomaltosyl, isomaltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein  $X_5$  and  $X_6$  participates to a double bond between the carbon atoms in position 4

and 5, wherein  $X_6$  is  $-H$ , wherein  $X_7$  is selected from the group comprising hydrogen, oxygen, hydroxyl, alkyloxy or oxo, wherein at least one of  $X_3$  and  $X'_3$  is a glycosyl moiety selected from the group as indicated above and wherein  $n$  is 0.

10. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein  $X_1$  and  $X_2$  are  $-OMe$ , wherein  $R_1$  and  $R_2$  are  $-H$ , wherein  $X_3$  or  $X'_3$  are independently selected from the group comprising hydrogen, glucosyl, fructosyl, galactosyl,mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, 10 maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-15 D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein  $X_4$  is hydrogen, wherein  $X_5$  and  $X_6$  participates to a double bond between the carbon atoms in position 5 and 6, wherein 20  $X_6$  is  $-H$ , wherein  $X_7$  is selected from the group comprising glucosyl, fructosyl, galactosyl,mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-25 galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein at least one of  $X_3$  and  $X'_3$  is a glycosyl moiety selected from the group as indicated above and wherein  $n$  is 0.

11. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate

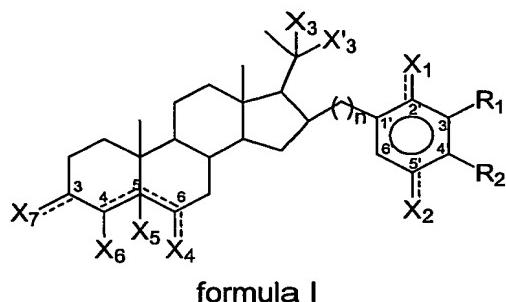
thereof, wherein  $X_1$  and  $X_2$  are  $-OMe$ , wherein  $R_1$  and  $R_2$  are  $-H$ , wherein  $X_3$  participates together with  $X'_3$  to an oxo functional group or are independently selected from the group comprising hydrogen, hydroxyl, alkyloxy, wherein  $X_4$  is selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein  $X_5$  and  $X_6$  participates to a double bond between the carbon atoms in position 4 and 5, wherein  $X_6$  is  $-H$ , wherein  $X_7$  is selected from the group comprising glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllectosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, and wherein n is 0.

12. A compound according to any of claims 1 to 4, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein  $X_1$  and  $X_2$  are  $-OMe$ , wherein  $R_1$  and  $R_2$  are  $-H$ , wherein  $X_3$  or  $X'_3$  are independently selected from the group comprising hydrogen, glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O-

D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein X<sub>4</sub> is selected from the group comprising glucosyl, fructosyl, galactosyl,mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy-glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein X<sub>5</sub> and X<sub>6</sub> participates to a double bond between the carbon atoms in position 4 and 5, wherein X<sub>6</sub> is -H, wherein X<sub>7</sub> is selected from the group comprising glucosyl, fructosyl, galactosyl,mannosyl, fucosyl, isomaltosyl, maltosyl, cellobiosyl, gentiobiosyl, melibiosyl, palatinosyl, lactulosyl, 3-mannobiosyl, 6-mannobiosyl, 3-galactobiosyl, 4-galactobiosyl, maltotriosyl, maltotetraosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 2-amino-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, 6'-N-acetylglucosaminyllactosyl, 2-acetamido-2-deoxy-3-O- $\alpha$ -L-fucosyl-D-glucosyl, 6-O(2-acetamido-2-deoxy- $\beta$ -D-glucosyl)-D-galactosyl, 2-acetamido-2-deoxy-3-O- $\beta$ -D-galactosyl-D-glucosyl, 2'-acetamido-2'-deoxy-3-O- $\beta$ -D-glucosyl-D-galactosyl, 3-fucosyl-D-lactosyl, 3-fucosyl-2-acetamido-2-deoxy-4-O- $\beta$ -D-galactosyl-D-glucosyl, L or D isomers thereof,  $\alpha$  or  $\beta$  form thereof, pyranuronic or furanuronic form thereof, pyranose or furanose form thereof, a disaccharide or a trisaccharide thereof, wherein at least one of X<sub>3</sub> and X'<sub>3</sub> is a glycosyl moiety selected from the group as indicated above and wherein n is 0.

13. Compound of formula I, stereoisomers, tautomers, racemics, prodrugs, metabolites thereof, or a pharmaceutically acceptable salt and/or solvate thereof, wherein  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X'_3$ ,  $X_4$ ,  $X_5$ ,  $X_6$ ,  $X_7$ ,  $R_1$ ,  $R_2$  and  $n$  are selected as indicated in Table A.

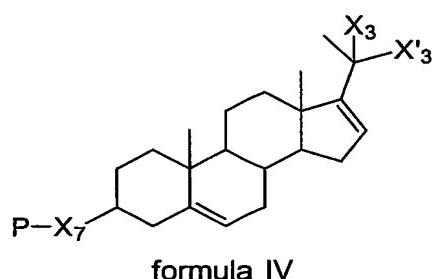
14. Method for synthesizing a compound having the structural formula I



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wherein  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$ ,  $X_6$ ,  $X_7$ ,  $R_1$ ,  $R_2$  and  $n$  are independently selected from the group as indicated in any of claims 1 to 13, said method comprising the steps of

a) providing a starting material having the structural formula IV,



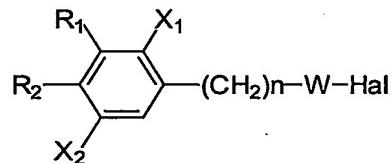
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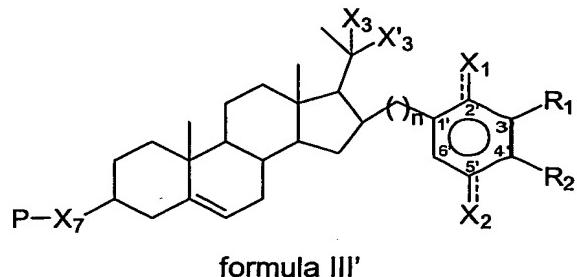
wherein  $X_3$  participates together with  $X'_3$  to an oxo functional group, or wherein  $X_3$  and  $X'_3$  are independently selected from the group comprising hydrogen, hydroxyl, sulfur, oxyalkyl, oxycarbonyl, alkyl, Het<sup>1</sup>alkyl, alkyloxycarbonyl, alkenyl, alkynyl, aminoalkyl, aminoacyl, alkylcarbonylamino, alkylthiocarbonylamino, Het<sup>1</sup>, optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen or amino optionally mono- or disubstituted wherein the substituents are independently selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and cycloalkylalkyl;

- wherein  $X_7$  is selected from the group comprising hydrogen, oxygen, halogen, oxo, carbonyl, thiocarbonyl, hydroxyl, alkyl, aryl, Het<sup>1</sup>, Het<sup>1</sup>alkyl, Het<sup>1</sup>aryl, alkenyl, alkynyl, hydroxyalkyl, hydroxycarbonyl, hydroxycarbonylalkyl, hydroxycarbonylaryl, hydroxycarbonyloxyalkyl optionally substituted by one or more substituents independently selected from the group comprising alkyl, aralkyl, aryl, Het<sup>1</sup>, Het<sup>2</sup>, cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O)t, hydroxy, cyano, halogen or amino optionally mono- or disubstituted wherein the substituents are independently selected from the group comprising alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and cycloalkylalkyl; and wherein P is a protecting group,
- b) effecting reaction between the compound of step a) with an organometallic compound having the structural formula V



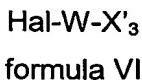
- wherein  $X_1$ ,  $X_2$ ,  $R_1$ ,  $R_2$  and  $n$  are independently selected from the group as indicated in any of claims 1 to 13, wherein W is a metal or a combination of metals and 20 wherein Hal is a halogen atom,

to result in an intermediate having the structural formula III'

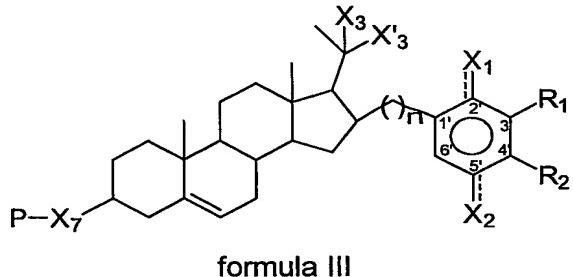


- wherein  $X_1$ ,  $X_2$ ,  $R_1$ ,  $R_2$  and  $n$  are independently selected from the group as indicated in any of claims 1 to 13, wherein  $X_3$ ,  $X'_3$ ,  $X_7$  are independently selected from the group as indicated in step a) and wherein P is a protecting group,

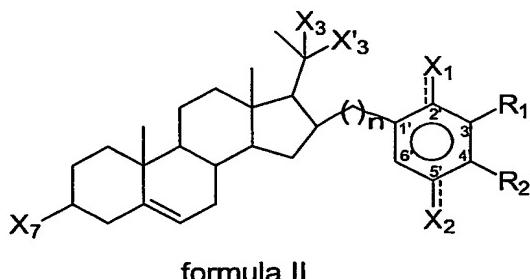
- c) effecting reaction between the compound of step b) with an organometallic compound having the structural formula VI



- 5 wherein X'<sub>3</sub> is selected from the group as indicated in step a), wherein W is a metal or a combination of metals, and wherein Hal is a halogen atom,  
to result in an intermediate having the structural formula III



- 10 wherein X<sub>1</sub>, X<sub>2</sub>, R<sub>1</sub>, R<sub>2</sub> and n are independently selected from the group as indicated in any of claims 1 to 13, wherein X<sub>3</sub>, X'<sub>3</sub>, X<sub>7</sub> are independently selected from the group as indicated in step a), wherein P is a protecting group,  
d) deprotecting the X<sub>7</sub> group of the compound obtained in step c) to form an compound having the structural formula II



- 15 wherein X<sub>1</sub>, X<sub>2</sub>, R<sub>1</sub>, R<sub>2</sub> and n are independently selected from the group as indicated in any of claims 1 to 13, wherein X<sub>3</sub>, X'<sub>3</sub>, X<sub>7</sub> are independently selected from the group as indicated in step a), and  
20 e) coupling an O-protected glycosyl or non-protected glycosyl to form a compound of formula IIB wherein X<sub>1</sub>, X<sub>2</sub>, R<sub>1</sub>, R<sub>2</sub> and n are independently selected from the group as indicated in any of claims 1 to 13, wherein X<sub>3</sub> and X'<sub>3</sub> are independently selected from the group as indicated in step a), and X<sub>7</sub> is an O-protected glycosyl or a non-protected glycosyl, and

f) deprotecting the O-protected groups of glycosyl to form a compound of formula IB wherein  $X_1$ ,  $X_2$ ,  $X_4$ ,  $X_5$ ,  $X_6$ ,  $R_1$ ,  $R_2$  and  $n$  are independently selected from the group as indicated in any of claims 1 to 13, wherein  $X_3$ ,  $X'_3$  are independently selected from the group as indicated in step a), and  $X_7$  is selected from the group comprising glycosyl, thio-

5 derivatives thereof, amino derivatives thereof, amido derivatives thereof, hydroxyl-protected derivatives thereof.

15. Method according to claim 14, wherein step e) consists of reacting the compound of step d) with an oxidizing reagent to form an intermediate and reducing said intermediate with a reducing reagent to result in another intermediate having the structural formula I

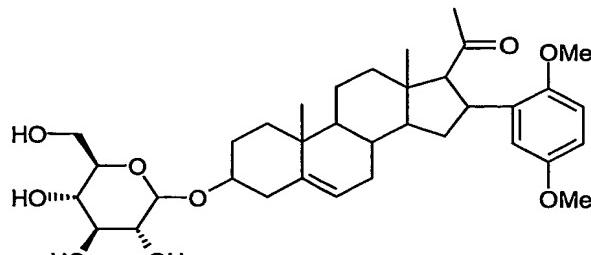
10 wherein  $X_1$ ,  $X_2$ ,  $R_1$ ,  $R_2$  and  $n$  are independently selected from the group as indicated in any of claims 1 to 13, and  $X_3$  or  $X'_3$ , and  $X_4$  and  $X_7$  are hydroxyl and continuing the reaction with steps e) and f) according to claim 14 to form a glycosylated steroid compound of structural formula I.

16. Method according to claim 14, wherein step c) consists of reacting the compound of

15 step b) with an O-protected glycosyl or non-protected glycosyl to result in an intermediate having the structural formula III wherein  $X_1$ ,  $X_2$ ,  $R_1$ ,  $R_2$  and  $n$  are independently selected from the group as indicated in any of claims 1 to 13, wherein  $X_3$ ,  $X_7$  are independently selected from the group as indicated in step a) of claim 14, wherein P is a protecting group, and wherein  $X_3$  or  $X'_3$  is an O-protected glycosyl or a non protected glycosyl and 20 continuing the reaction with steps d), e) and f) according to claim 14 to form a glycosylated steroid compound of structural formula I.

17. A compound obtainable by any of the steps according to the method of any of claims 14 to 16.

18. A compound of structural formula:

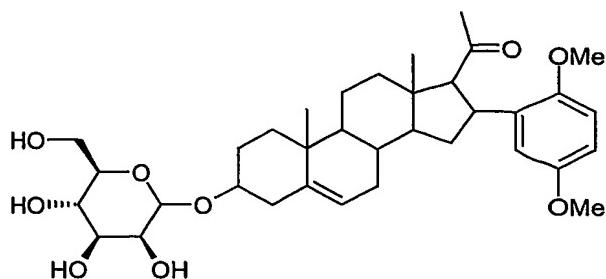


herein designated as compound **UBS3268**

25

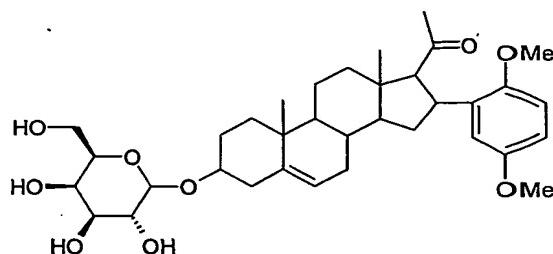
19. A compound of structural formula:

91



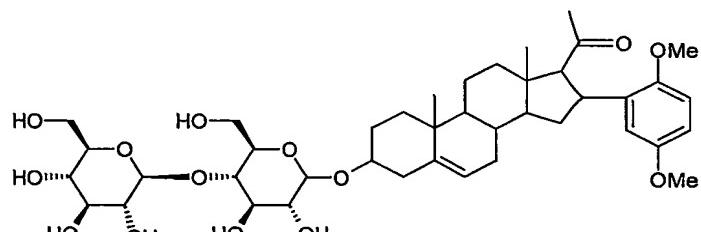
herein designated as compound **UBS3270**

20. A compound of structural formula:



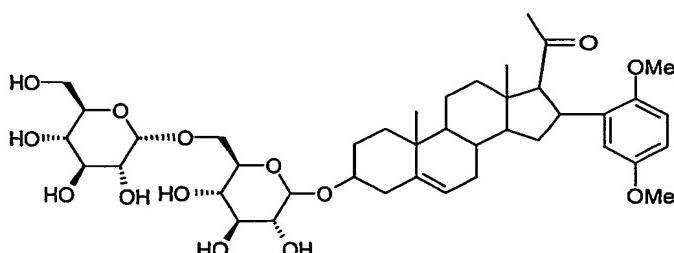
herein designated as compound **UBS3285**

5 21. A compound of structural formula:



herein designated as compound **UBS3327**

22. A compound of structural formula:

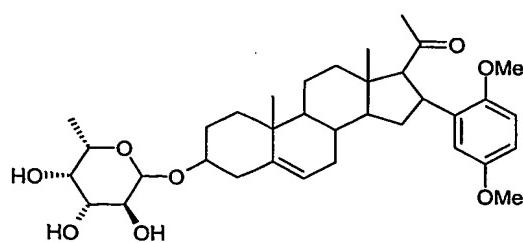


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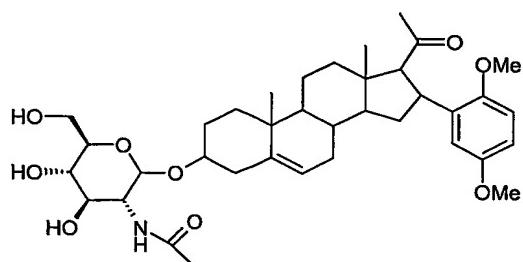
herein designated as compound **UBS3328**

23. A compound of structural formula:

92

herein designated as compound **UBS3501**

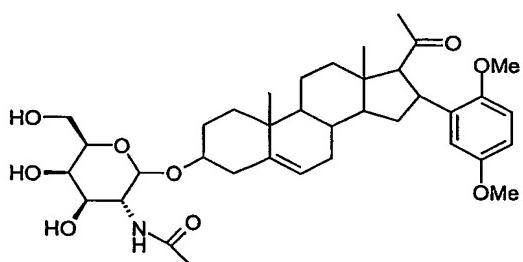
24. A compound of structural formula:



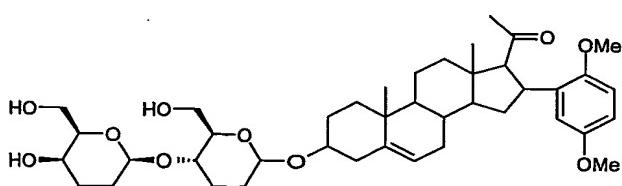
5

herein designated as compound **UBS3585**

25. A compound of structural formula:

herein designated as compound **UBS3597**

26. A compound of structural formula:

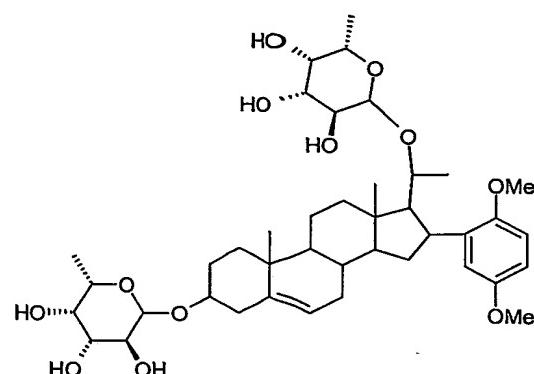


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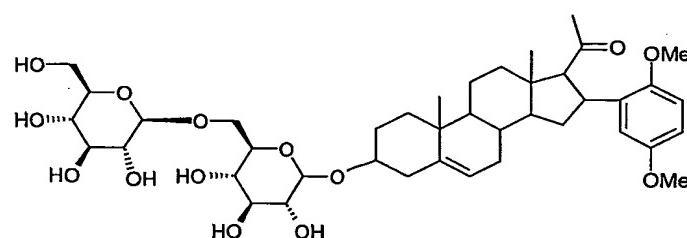
herein designated as compound **UBS3976**

27. A compound of structural formula:

93

herein designated as compound **UBS4066**

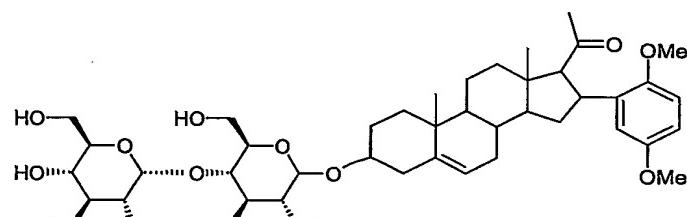
28. A compound of structural formula:



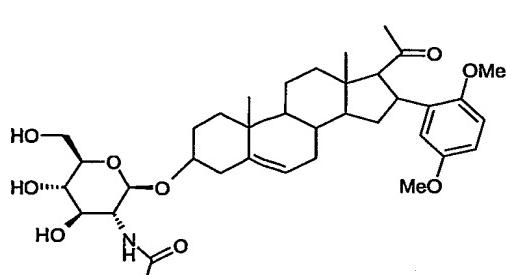
5

herein designated as compound **UBS4067**

29. A compound of structural formula:

herein designated as compound **UBS4095**

30. A compound of structural formula:

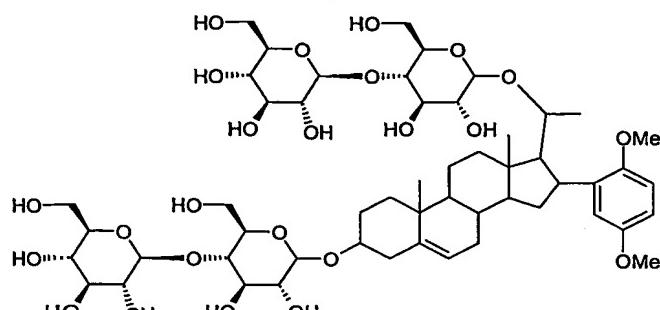


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herein designated as compound **UBS4104**

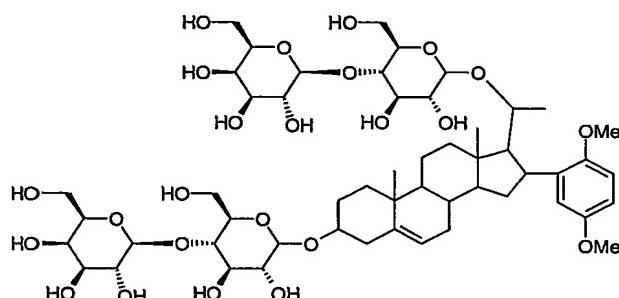
31. A compound of structural formula:

94



herein designated as compound UBS4109

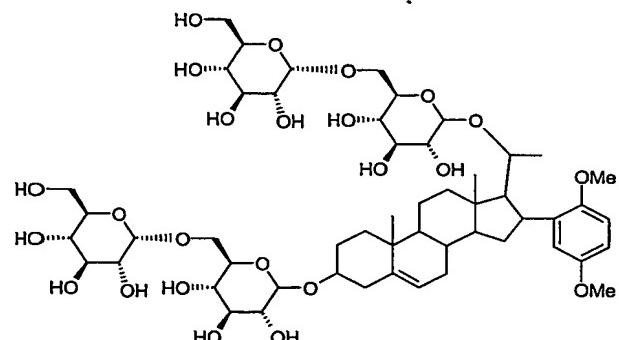
32. A compound of structural formula:



herein designated as compound UBS4209

5

33. A compound of structural formula:



herein designated as compound UBS4373

34. A compound according to any of claims 1 to 13 and 17 to 33 for use as a medicament.

10 35. A compound according to any of claims 1 to 13 and 17 to 33 for use as an anti-migratory agent.

36. Use of a compound according to any of claims 1 to 13 and 17 to 33 for the preparation of a medicament for treating cancer.

15 37. A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a therapeutically effective amount of a compound according to any of claims 1 to 13 and 17 to 33.

38. Use of a pharmaceutical composition according to claim 37 in the treatment of cancer.

95

39. Method of treating cancer comprising administrating to an individual in need of such treatment a pharmaceutical composition according to claim 37.